



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/988,722	11/20/2001	Ofir Shalvi	TI-32222	9142

7590 06/19/2006

DANA L. BURTON  
TEXAS INSTRUMENTS INCORPORATED  
P.O. BOX 655474, MS 3999  
DALLAS, TX 75265

EXAMINER

SEFCHECK, GREGORY B

ART UNIT	PAPER NUMBER
----------	--------------

2616

DATE MAILED: 06/19/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	09/988,722	SHALVI ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Gregory B. Sefcheck	2616	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 06 April 2006.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1 and 2 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1 and 2 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)             | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                                    |

### DETAILED ACTION

- Applicant's Amendment filed 4/6/2006 is acknowledged.
- Claims 1 and 2 have been amended.
- Claims 1 and 2 remain pending.

### *Claim Rejections - 35 USC § 103*

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ohta (US005878277A) in view of Ho (US006963545B1).

- In regards to Claims 1,

Ohta discloses a communication system having at least two types of communication channels (Title; claim 1 – data communication system with a transmission channel having sub-channels for transmitting and receiving data).

Referring to Fig. 1, Ohta shows a first and second user terminal 5-1 and 5-2. Ohta discloses that terminals may be granted a dedicated communication channel as well as a common channel shared among a plurality of terminals for communicating with other terminals (Abstract; claim 1 – first terminal for transmission of data on one or more of a first plurality of sub-channels; claim 1 – second terminal for transmission of data on

one or more of a second plurality of sub-channels; claim 1 – first and second plurality of subchannels are partially overlapping such that at least one sub-channel is shared and at least one sub-channel is not shared by the first and second terminal).

Ohta discloses that terminals communicate through a central station that has a control unit for allocating the dedicated and common channels based upon request from the terminal (Abstract; claim 1 – control mechanism for allocating data transmission for the first terminal to one or more of the first plurality of sub-channels and allocating data transmission for the second terminal to one or more of the second plurality of sub-channels).

Ohta further discloses that dedicated channels are best suited for terminals requesting a telephone call or other service where instantaneous communication where terminals are allowed to occupy the line until they terminate the communication is preferred (Col. 6-7, lines 62-2). Furthermore, Ohta discloses that delay base communication such as that employed through a multiplexed common channel is desirable to data communication. However, Ohta does not explicitly disclose requesting and communicating on both the dedicated and common channels by a terminal at the same time.

Ho discloses voice-data integrated multi-access (Title). Ho discloses that a user terminal 11 (Fig. 1) can generate different types of traffic, such as voice and data, simultaneously sharing the same transceiver (Col. 4, lines 10-16; claim 1 – at least one of the terminals transmits and receives data simultaneously on the shared sub-channel and the one or more first and second plurality of subchannels).

It would have been obvious to one of ordinary skill in the art at the time of the invention to facilitate simultaneous communication of voice and data from a user terminal, as shown by Ho, using both the dedicated and common channels shown in the system of Ohta. One would be motivated to utilize the system of Ohta for the simultaneous transmission of voice and data in Ho because Ohta provides different, preferred channel types for transmission of different data types, such as voice and data, such that the properties and requirements of the communication are upheld and collisions are avoided, even when communicated simultaneously.

3. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Andersson et al. (US 20030012217A1), hereafter Andersson, in view of Pankaj (US006324172B1).

- In regards to Claim 2,

Andersson discloses a method of operating data transmission and reception in a data communication system for a plurality of terminals over a radio interface (transmission channel) having both dedicated channels and common channels (sub-channels; Abstract; Fig. 4; claim 2 – method of data transmission in a communication system with a transmission channel having sub-channels for transmitting and receiving data).

Referring to Fig. 10, Andersson shows that a first dedicated channel and a common channel are available for transmission of user data from a first terminal (claim

2 – allocating two or more first sub-channels to a first terminal wherein one of the first sub-channels is a first primary sub-channel and another one is a first secondary sub-channel).

Similarly, Andersson shows that a second dedicated channel and the common channel can be allocated for transmission of user data from a second terminal, where the second dedicated channel is different from the first dedicated channel and the common channel for each terminal is the same (claim 2 – allocating one or more second sub-channels to a second terminal wherein one of the second sub-channels is the same sub-channel as the first secondary sub-channel and none of the second sub-channels are the same sub-channel as the first primary sub-channel).

Andersson further shows a Channel Type Switch (CTS) 206-210 that controls the allocation of dedicated channel or common channel for data transmission for the first and second terminal. Referring to Fig. 8, Andersson discloses that data transmission from the first terminal is performed over the first dedicated channel (primary sub-channel) as long as no congestion is detected on that channel (Steps 130-142; Pg. 2, paragraph 10; claim 2 – determining if the first primary sub-channel is congested; claim 2 – transmitting data from or receiving data at the first terminal on the first primary sub-channel if not congested).

However, if the first dedicated channel is congested, transmission over the common channel is requested by checking the throughput of the common channel (Steps 144; claim 2 – requesting to send data on the first secondary sub-channel if the first primary sub-channel is congested). If the throughput of the common channel is

detected to be greater than the throughput of the congested dedicated channel, among other possible factors and considerations, data transmission is switched to the common channel (Steps 144-152; Pg. 2, paragraph 15 and 16; claim 2 – receiving confirmation that the data may be sent on the first secondary sub-channel; claim 2 – transmitting data from or receiving data at the first terminal on the first secondary sub-channel).

Also see Pgs. 3-6, paragraphs 30-32 and 44-48.

Andersson does not explicitly disclose simultaneously communicating a portion of data over the secondary sub-channel while also transmitting data over the primary sub-channel.

Pankaj discloses a method of allocating the capacity of a common channel among a number of data producers (user terminals; Abstract). Pankaj discloses that a channel is divided into reserved portions (dedicated) for each user. That part of the channel which remains (common) may be granted to particular users which require additional capacity because its dedicated allocation (dedicated allocation) is insufficient (congested) to carry its data load (Abstract; Col. 6, lines 34-42).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the method of Andersson by enabling the switching from a dedicated channel to a common channel only data which cannot be accommodated on the dedicated channel, as shown by Pankaj. This would result in better bandwidth utilization of the system, as the bandwidth of the dedicated channel is not left unutilized by switching all of the user data from the dedicated to the common channel.

***Response to Arguments***

4. Applicant's arguments with respect to claims 1 and 2 have been considered but are moot in view of the new ground(s) of rejection.

***Conclusion***

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- Rasanen (US 20050250505A1)
- Jung et al. (US006621807B1)
- Greenspan et al. (US006516191B1)

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any



Art Unit: 2616

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gregory B. Sefcheck whose telephone number is 571-272-3098. The examiner can normally be reached on Monday-Friday, 8:00am-4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Seema Rao can be reached on 571-272-3174. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

GBS *GBS*  
6-15-2006

*Seema S. Rao*  
SEEMA S. RAO 6/15/06  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2600